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(Modified) PTO/SB/21 (6-98)  
Approved for use through 09/30/2000. OMB 0651-0031  
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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# TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Application Number	10/046059
Filing Date	October 26, 2001
First Named Inventor	David F. Bocian
Group Art Unit	2818
Examiner Name	Unassigned
Attorney Docket Number	407T-300800US

Total Number of Pages in This Submission

## ENCLOSURES (check all that apply)

- ☐ Fee Transmittal Form
- ☐ Fee Attached
- ☐ Amendment / Response
- ☐ After Final
- ☐ Affidavits/declaration(s)
- ☐ Extension of Time Request
- ☐ Express Abandonment Request
- ☒ Information Disclosure Statement
- ☐ Certified Copy of Priority Document(s)
- ☐ Response to Missing Parts/ Incomplete Application
- ☐ Response to Missing Parts under 37 CFR 1.52 or 1.53

- ☐ Assignment Papers (for an Application)
- ☐ Drawing(s)
- ☐ Licensing-related Papers
- ☐ Petition Routing Slip (PTO/SB/69) and Accompanying Petition
- ☐ Petition to Convert to a Provisional Application
- ☐ Power of Attorney, Revocation Change of Correspondence Address
- ☐ Terminal Disclaimer
- ☐ Small Entity Statement
- ☐ Request for Refund

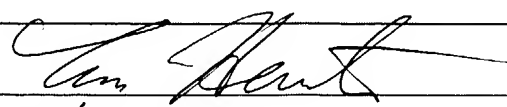
- ☐ After Allowance Communication to Group
- ☐ Appeal Communication to Board of Appeals and Interferences
- ☐ Appeal Communication to Group (Appeal Notice, Brief, Reply Brief)
- ☐ Proprietary Information
- ☐ Status Letter
- ☒ Additional Enclosure(s) (please identify below):  
PTO Form 1449; Copy of Corresponding PCT Search Report; Cited References; receipt acknowledgment postcard

### Authorization to Charge Deposit Account

Please charge Deposit Account No. 50-0893 for any additional fees associated with this paper or during the pendency of this application, including any extensions of time for consideration of the documents enclosed.

Remarks

## SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

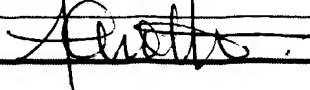
Firm or Individual name	Tom Hunter, Reg. No. 38,498, Quine Intellectual Property Law Group, P.C.
Signature	
Date	4/15/03

## CERTIFICATE OF MAILING

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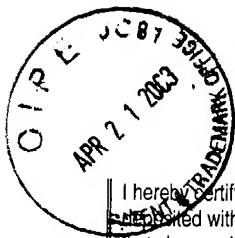
Typed or printed name Amelia Groth

Signature



Date

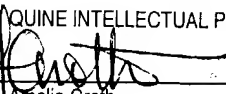
April 16, 2003



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Washington, D.C. 20231, on April 16, 2003

QUINE INTELLECTUAL PROPERTY LAW GROUP, P.C.

By

  
Amelia Groth

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Attorney Docket No. 407T-300800US  
Client Ref. No. 2001-473-1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

David F. Bocian, et al.

Application No.: 10/040,059

Filed: October 26, 2001

For: FORMATION OF SELF-  
ASSEMBLED MONOLAYERS OF  
REDOX SAMs ON SILICON FOR  
MOLECULAR MEMORY  
APPLICATIONS

Examiner: Unassigned

Art Unit: 2818

INFORMATION DISCLOSURE  
STATEMENT UNDER 37 CFR § 1.97 and  
§ 1.98

Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

The references cited on attached form PTO-1449 are being called to the attention of the Examiner. Copies of the references are enclosed. Also, enclosed is a copy of International Search Report for corresponding International Application No. PCT/US02/33045. It is respectfully requested that the cited information be expressly considered during the prosecution of this application, and the references be made of record therein and appear among the "references cited" on any patent to issue therefrom.

As provided for by 37 CFR 1.97(g) and (h), no inference should be made that the information and references cited are prior art merely because they are in this statement and no

representation is being made that a search has been conducted or that this statement encompasses all the possible relevant information.

Applicant believes that no fee is required for submission of this statement, since it is being submitted prior to the first Office Action on the merits per 37 CFR 1.97(b)(3). However, if a fee is required, the Commissioner is authorized to deduct such fee from the undersigned's Deposit Account No. 50-0893. Please deduct any additional fees from, or credit any overpayment to, the above-noted Deposit Account.

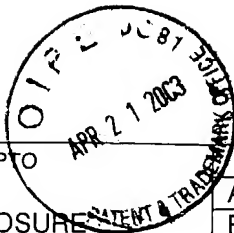
Respectfully submitted,



Tom Hunter, J.D., Ph.D.  
Reg. No. 38,498

QUINE INTELLECTUAL PROPERTY LAW GROUP, P.C.  
P.O. BOX 458  
Alameda, CA 94501  
(510) 337-7871  
Fax (510) 337-7877

TH:ag



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Substitute for form 1449A-B/PTO

INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT

(use as many sheets as necessary)

Complete if Known

Application Number	10/040,059
Filing Date	October 26, 2001
First Named Inventor	David F. Bocian
Group Art Unit	2818
Examiner Name	Unassigned
Attorney Docket Number	407T-300800US
Date Submitted	April 16, 2003

U.S. PATENT DOCUMENTS

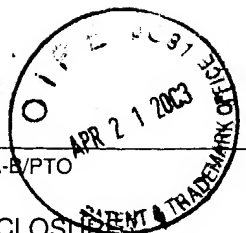
Examiner Initials	Cite No.	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, lines, Where Relevant Passages or Relevant Figures Appeal
		Number	Kind Code (if known)			
	1	3,637,581		Horiguchi et al.	1/25/1972	
	2	4,618,509		Bulkowski	10/21/1986	
	3	5,089,872		Ozturk et al.	2/18/1992	
	4	5,173,443		Biricik et al.	12/22/1992	
	5	5,280,183		Batzel et al.	1/18/1994	
	6	5,281,552		King et al.	1/25/1994	
	7	5,294,285		Kanai et al.	3/15/1994	
	8	5,463,014		Epstein et al.	10/31/1995	
	9	5,475,075		Brant et al.	12/12/1995	
	10	5,547,774		Gimzewski et al.	8/20/1996	
	11	5,814,420		Chu	9/29/1998	
	12	5,844,055		Brandt et al.	12/1/1998	
	13	6,013,170		Meade	1/11/2000	
	14	6,031,756		Gimzewski et al.	2/29/2000	
	15	6,128,214		Kuekes et al.	10/3/2000	
	16	6,136,678		Adetutu et al.	10/24/2000	
	17	6,246,505		Teowee et al.	6/12/2001	
	18	6,324,091		Gryko et al.	11/27/2001	
	19	6,381,169		Bocian et al.	4/30/2002	
	20	6,451,942		Li et al.	9/17/2002	
	21	2002-0197806		Furukawa et al.	12/26/2002	

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T
	22	"Ferrocene--Molecule of the Month" Jun. 1996, University of Oxford Web Page, <a href="http://www.ncl.ox.ac.uk/mom/ferrocene/ferrocene2.html">http://www.ncl.ox.ac.uk/mom/ferrocene/ferrocene2.html</a> .	

Examiner Signature		Date Considered	
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



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Substitute for form 1449A-B/PTO  INFORMATION DISCLOSURE STATEMENT BY APPLICANT  (use as many sheets as necessary)	Complete if Known	
	Application Number	10/040,059
	Filing Date	October 26, 2001
	First Named Inventor	David F. Bocian
	Group Art Unit	2818
	Examiner Name	Unassigned
	Attorney Docket Number	407T-300800US
Date Submitted	April 16, 2003	

23	"Ferrocene--Synthesis", Jun. 1996, University of Oxford Web Page, <a href="http://www.ncl.ox.ac.uk/mom/ferrocene/synthesis.html">http://www.ncl.ox.ac.uk/mom/ferrocene/synthesis.html</a> .
24	BUCHLER AND NG (2000) In <i>The Porphyrin Handbook</i> , Vol. 3, Pages 245-294, Eds. K. M. Kadish, K. M. Smith, R. Guilard, Academic Press, San Diego, CA
25	CHABACH ET AL. (1996) "Mixed-Metal Triple-Decker Sandwich Complexes with the Porphyrin/Phthalocynine/Porphyrin Ligand System" <i>Angew. Chem. Int. Ed. Engl.</i> , 35: 898
26	COTTON ET AL (1976) <i>Basic Inorganic Chemistry</i> , pp. 125, 497, 518
27	DUCHOWSKI ET AL. (1990) Spectroscopic Characterization of Triple Decker Lanthanide Porphyrin Sandwich Complexes. Effects of Strong $\pi \pi$ Interactions in Extended Assemblies" <i>J Am. Chem. Soc.</i> 112: 8807-8811
28	GORMAN (1997) "Encapsulated Electroactive Molecules" <i>Adv. Mater.</i> 9(14) 1117-1119
29	GORMAN (1999) "Molecular Structure-Property Relationships for Electron-Transfer Rate Attenuation in Redox-Active Core Dendrimers" <i>J. Am. Chem. Soc.</i> 121: 9958-9966
30	GROSS (2001) "Investigation of Rational Synthesis of Heteroleptic Porphyrinic Lanthanide (Europium, Cerium) Triple-Decker Sandwich Complexes" <i>Inorg. Chem.</i> 40: 4762-4774
31	GRYKO (2000) "Synthesis of Thiol-Derivatized Ferrocene-Porphyrins for Studies of Multibit Information Storage" <i>J. Org. Chem.</i> 65: 7356-7362
32	GRYKO (2001) "Studies Related to the Design and Synthesis of a Molecular Octal Counter" <i>J. Mater. Chem.</i> 11: 1162-1180
33	JIANG ET AL. (1998) "Heteroleptic Triple-Decker (Phthalocyaninato)-Porphyrinato) Europium (III) Complexes: Synthesis and Electrochemical Study" <i>Inorganica Chimica Acta</i> 268: 49-53
34	LI ET AL. (2000) "Synthesis of Thiol-Derivatized Europium Porphyrinic Triple-Decker Sandwich Complexes for Multibit Molecular Information Storage" <i>J. Org. Chem.</i> 65: 7379-7390
35	RUBEN ET AL. (2000) "Multilevel Molecular Electronic Species: Electrochemical Reduction of a [2X2] Co <sub>4</sub> Grid Type Complex by 11 Electrons in 10 Reversible Steps" <i>Angew. Chem. Int. Ed.</i> 39(22) 4139-4142
36	SOMMERAUER ET AL. (1996) "Separation of 1(3), 9(10), 16(17), 23(24)-Tetrasubstituted Phthalocyanines with Newly Developed HPLC Phases" <i>J. Am Chem. Soc.</i> 118: 10085-10093
37	WONG ET AL. (1974) "Lanthanide Porphyrin Complexes, A Potential New Class of Nuclear Magnetic Resonance Dipolar Probe" <i>J. Am. Chem. Soc.</i> 96(22) 7149-7150

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

# PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To:  
ROBERT BERLINER  
FULBRIGHT & JAWORSKI L.L.P.  
865 SOUTH FIGUEROA  
TWENTY-NINTH FLOOR  
LOS ANGELES, UNITED KINGDOM 90017-2571

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MAR 31 2003

## PCT

NOTIFICATION OF TRANSMITTAL OF  
THE INTERNATIONAL SEARCH REPORT  
OR THE DECLARATION

(PCT Rule 44.1)

Date of Mailing  
(day/month/year)

**31 MAR 2003**

Applicant's or agent's file reference  
LA-5555-603

FULBRIGHT & JAWORSKI

**FOR FURTHER ACTION** See paragraphs 1 and 4 below

International application No.  
PCT/US02/33045

International filing date  
(day/month/year)

14 October 2002 (14.10.2002)

Applicant  
THE REGENTS OF THE UNIVERSITY OF CALIFORNIA

**DOCKETED FOR**

5/31/03 AIME

1. ☒ The applicant is hereby notified that the international search report has been established and is transmitted herewith.

**Filing of amendments and statement under Article 19:**

The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

**When?** The time limit for filing such amendments is normally two months from the date of transmittal of the international search report.

**Where?** Directly to the International Bureau of WIPO, 34, chemin des Colombettes  
1211 Geneva 20, Switzerland, Facsimile No.: (41-22) 740.14.35

**For more detailed instructions, see the notes on the accompanying sheet.**

2. ☐ The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect is transmitted herewith.

3. ☐ **With regard to the protest against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:**

- ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.
- ☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

**4. Reminders**

Shortly after **18 months** from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau as provided in Rules 90 *bis*.1 and 90 *bis*.3, respectively, before the completion of the technical preparations for international publication.

Within **19 months** from the priority date, but only in respect of some designated Offices, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase until **30 months** from the priority date (in some Offices even later); otherwise the applicant must, within **20 months** from the priority date, perform the prescribed acts for entry into the national phase before those designated Offices.

In respect of other designated Offices, the time limit of **30 months** (or later) will apply even if no demand is filed within 19 months.

See the Annex to Form PCT/IB/301 and, for details about the applicable time limits, Office by Office, see the *PCT Applicant's Guide*, Volume II, National Chapters and the WIPO Internet site.

Name and mailing address of the ISA/US  
Commissioner for Patents  
Box PCT  
Washington, D.C. 20231

Facsimile No. (703)305-3230  
Form PCT/ISA/220 (April 2002)

Authorized officer

Richard Elms

Telephone No. (703) 308-1

*Deborah P. Vega*  
**Deborah P. Vega**  
Patent Specialist

(See notes on accompanying sheet)  
**Technology Center 2800**  
**(703) 308-3078**

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference LA-5555-603	<b>FOR FURTHER ACTION</b>	see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.
International application No. PCT/US02/33045	International filing date ( <i>day/month/year</i> ) 14 October 2002 (14.10.2002)	(Earliest) Priority Date ( <i>day/month/year</i> ) 26 October 2001 (26.10.2001)
Applicant THE REGENTS OF THE UNIVERSITY OF CALIFORNIA		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 2 sheets.



It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the Report**

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.



the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing:



contained in the international application in written form.



filed together with the international application in computer readable form.



furnished subsequently to this Authority in written form.



furnished subsequently to this Authority in computer readable form.



the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.



the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (See Box II).

4. With regard to the **title**,



the text is approved as submitted by the applicant.



the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,



the text is approved as submitted by the applicant.



the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No. 2



as suggested by the applicant.



because the applicant failed to suggest a figure.



because this figure better characterizes the invention.



None of the figures

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US02/33045

**A. CLASSIFICATION OF SUBJECT MATTER**

IPC(7) : HO1L 21/3205, 21/4763

US CL : 438/96, 166, 182, 422, 592, 624, 640

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 438/96, 166, 182, 422, 592, 624, 640

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
EAST (PGPUB, USPATFULL)**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 20020197806 A (FURUKAWA et al) 26 December 2002 (26.12.2002), whole document.	1-98
A	US 6,136,678 A (ADETUTU et al) 24 October 2000 (24.10.2000), whole document.	1-98
A	US 6,246,505 B1 (TEOWEE et al) 12 June 2001 (12.06.2001), whole document.	1-98
A	US 5,294,285 A (KANAI et al) 15 March 1994 (15.03.1994), whole document.	1-98
A	US 5,281,552 A (KING et al) 25 January 1994 (25.01.1994), whole document.	1-98
A	US 5,173,443 A (BIRICIK et al) 22 December 1992 (22.12.1992), whole document.	1-98
A	US 5,089,872 A (OZTURK et al) 18 February 1992 (18.02.1992), whole document.	1-98

☐ Further documents are listed in the continuation of Box C.☐ See patent family annex.

## \* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&amp;" document member of the same patent family

Date of the actual completion of the international search

26 February 2003 (26.02.2003)

Date of mailing of the international search report

31 MAR 2003

Name and mailing address of the ISA/US

Commissioner of Patents and Trademarks  
Box PCT  
Washington, D.C. 20231

Facsimile No. (703)305-3230

Authorized officer

Richard Elms

Telephone No. (703) 308-1732

Deborah P. Vega

Form PCT/ISA/210 (second sheet) (July 1998)

Paralegal Specialist  
Technology Center 2800  
(703) 308-3078